

**Abstract**

[060] A signature-based traffic classification method maps traffic into preselected classes of service (CoS). By analyzing a known corpus of data that clearly belongs to identified ones of the preselected classes of service, in a training session the method develops statistics about a chosen set of traffic features. In an analysis session, relative to traffic of the network where QoS treatments are desired (target network), the method obtains statistical information relative to the same chosen set of features for values of one or more predetermined traffic attributes that are associated with connections that are analyzed in the analysis session, yielding a statistical features signature of each of the values of the one or more attributes. A classification process then establishes a mapping between values of the one or more predetermined traffic attributes and the preselected classes of service, leading to the establishment of QoS treatment rules.